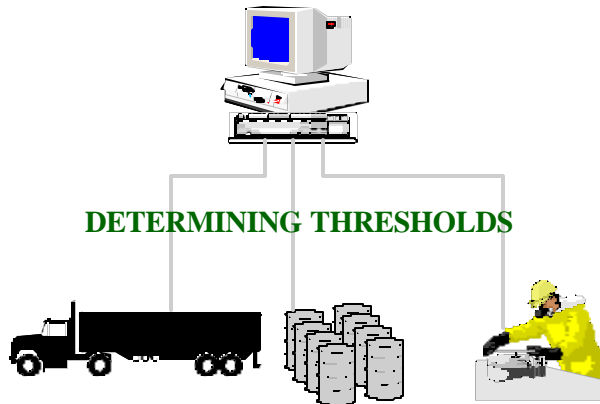
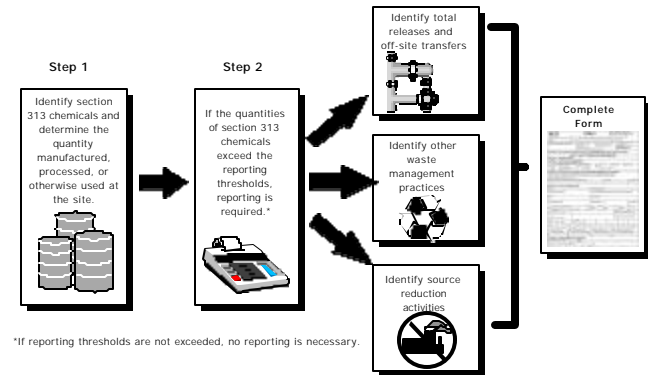


DETERMINING THRESHOLDS



TRI REPORTING PROCESS



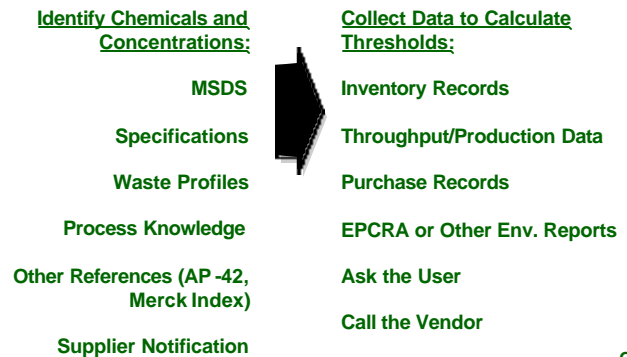
C-2

DETERMINING THRESHOLDS

- Identify what Section 313 chemicals are handled on-site
- Identify concentrations of Section 313 chemicals
- Collect data and calculate quantities towards each threshold

C-3

DETERMINING THRESHOLDS



C-4

SECTION 313 CHEMICALS AND CHEMICAL CATEGORIES

- Original list developed from Maryland “High Production Volume” and New Jersey “Right to Know” chemical lists
- Current list contains over 600 individual chemicals and chemical categories (See Table II of the EPA’s *TRI Reporting Forms and Instructions* document)
- Petition process to add or delete chemicals or forms of chemicals (EPCRA Section 313(e))

C-5

SECTION 313 CHEMICAL QUALIFIERS

- Qualifiers - Listed chemicals with parenthetical qualifiers subject to TRI reporting only if manufactured, processed, or otherwise used in specified form (§372.25(g)). Below are some examples (see Table II of EPA’s *TRI Reporting Forms and Instructions* document):

CHEMICAL	CAS#	QUALIFIER
Aluminum	7429-90-5	Fume or dust
Aluminum oxide	1344-28-1	Fibrous forms
Asbestos	1332-21-4	Friable forms
Isopropyl alcohol	67-63-0	Only manufacturers using strong acid process
Phosphorus	7723-14-0	Yellow or white
Saccharin	81-07-2	Manufacture only
Hydrochloric acid	7647-01-0	Acid aerosols
Sulfuric acid	7664-93-9	Acid aerosols
Vanadium	7440-62-2	Except when contained in alloy

C-6

SECTION 313 CHEMICALS

- Calculate threshold determinations and releases and other waste management estimates by multiplying the percentage of a Section 313 chemical by the total amount of the mixture, other trade name product, or waste
 - Example: 80,000 pounds of a solvent containing benzene was used on-site at the facility to clean machinery. The solvent contains 10% benzene.
 - » 80,000 lbs. X 10% = 8,000 lbs. of benzene otherwise used

C-7

COMPOUND CATEGORIES

- Count together all compounds that fall within a category, even if different compounds within a category are used in separate operations
 - Example: If a facility processes 20,000 pounds of 2-Butoxyethanol in one operation and 10,000 pounds of 2-(2-Butoxyethoxy)ethanol in another operation during the reporting year
 - » 30,000 pounds of glycol ethers have been processed. Reporting for glycol ethers category is required
- Consider the entire weight of the compounds in the category when determining thresholds
 - Calculations for release and other waste management estimate are different for metal and nitrate compounds

C-8

SUPPLIER NOTIFICATION FOR MIXTURES AND OTHER TRADE NAME PRODUCTS

- **Supplier notification (§372.45)** - requires suppliers to facilities described in §372.22 (i.e., covered facilities) to:
 - Identify Section 313 chemical(s) by name and CAS number
 - Identify Section 313 chemical(s) as being subject to Section 313 requirements
 - Provide concentration (or range) of Section 313 chemicals in mixtures and other trade name products (not wastes)
 - Provide notification at least annually in writing or attached to the MSDS
 - Update notification when changes occur
 - Only facilities in primary SIC codes 20-39 must initiate the notification

C-9

DETERMINING CONCENTRATIONS IN MIXTURES OR OTHER TRADE NAME PRODUCTS

- **Include a Section 313 chemical in the threshold determinations if you know (§372.30(b)(3)):**
 - Exact concentration - use concentration provided
 - Upper bound - use upper limit
 - Range - use the midpoint of the range
 - Lower bound - subtract out other known constituents, create a range, and use the midpoint of range
- **Note: Thresholds are based on weight in pounds, except for dioxins and dioxin-like compounds**

C-10

DETERMINING CONCENTRATIONS IN WASTES

- ***De minimis* exemption does not apply to wastes that are processed or otherwise used**
- **If concentration is exact, upper bound, range, or lower bound, use the guidance for mixtures and other trade name products**
- **If concentration is below detection limit, use engineering judgment:**
 - If the Section 313 chemical is expected to be present, you could assume 1/2 of full detection limit
 - If the Section 313 chemical is not expected to be present, you could assume 0

C-11

MEETING MULTIPLE THRESHOLDS

- **There are many situations where one Section 313 chemical must be counted towards multiple activity thresholds**
 - Section 313 chemicals manufactured or imported on-site, then used or incorporated into a product (processed)
 - Section 313 chemicals formed during destruction of wastes received from off-site and subsequently destroyed on-site (manufactured and otherwise used)
 - Section 313 chemicals that are otherwise used on-site, recycled, then processed
- **Section 313 chemicals should not be counted twice towards the same activity threshold**

C-12

WATCH FOR DOUBLE COUNTING WITHIN THE SAME ACTIVITY THRESHOLD!!!

- For threshold determinations, Section 313 chemicals reused or recycled at a facility: count original amount used only once (§372.25(e))
 - Note: Section 313 chemicals sent off-site for recycling and returned to the facility are considered new materials and counted for threshold determinations
 - For materials in use from previous years: count only the quantity added during current reporting year

C-13

MULTI-ESTABLISHMENT FACILITY

- Determining how facilities report
 - Multi-establishment facility (§372.30(c))
 - » Apply threshold determination on aggregate amount of chemicals used at facility
 - » Able to file separate Form R reports for each establishment if they are distinct economic entities (must be designated as part of a facility on Form R)
 - » Report all releases and other waste management activities of reportable Section 313 chemicals
 - » Avoid double-counting of chemicals involved in intra-facility transfers

C-14

CALCULATING THRESHOLDS

- Consider all activities
- Consider all sources
- Identify the avenues through which mixtures and trade name products enter your facility
 - Purchasing/inventory control
 - Contractors
 - Bulk deliveries
 - Capital purchases
 - “Credit card” or “emergency” purchases
 - Chemicals used in neutralization, refrigerants, cleaners, paints, lubricants (for non-vehicles), fuel (for non-vehicles), refractory bricks

C-15

ORCHESTRATING DATA COLLECTION

- Methods for orchestrating data collection
 - Coordinate with purchasing/vendors
 - Develop inventory controls
 - Require requisition or “sign out” procedure for Section 313 chemicals
 - Take year-end inventories
- Identify ALL chemical purchasing and usage
- Threshold determination worksheets for both PBT and non-PBT Section 313 chemicals

C-16

EXAMPLE: EPCRA Section 313 Non-PBT Chemical Reporting Threshold Worksheet

Facility Name: OMNI CHEMICAL Date Worksheet Prepared: _____
 Toxic Chemical or Chemical Category: Toluene Prepared By: J.S.P.
 Reporting Year: _____

Step 1. Identify amounts of the toxic chemical manufactured, processed, or otherwise used.

Mixture Name or Other Identifier	Information Source	Percent by Weight	Total Weight (in lbs.)	Amount of the Listed Toxic Chemical by Activity (in lbs.):		
				Manufactured	Processed	Otherwise Used
1. Joe's Degreaser	Purchasing	50	10,000			5,000
2. Yellow Bathroom Paint	Vendor	5	30,000			1,500
3. Parts Washer Fluid	Purchasing	40	10,000			4,000
4.						
5.						
6.						
7.						
Subtotal:				(A) _____ lbs.	(B) _____ lbs.	(C) 10,500 lbs.

Step 2. Identify exempt forms of the toxic chemical that have been included in Step 1.

Mixture Name as Listed Above	Applicable Exemption	Note, Fraction or Percent Exempt (if Applicable)	Exempt Amount of the Toxic Chemical from Above (in lbs.):		
			Manufactured	Processed	Otherwise Used
1. Yellow Bathroom Paint	Strict Comp.	100			1,500
2.					
3.					
4.					
5.					
6.					
7.					
Subtotal:			(A ₁) _____ lbs.	(B ₁) _____ lbs.	(C ₁) 1,500 lbs.

Step 3. Calculate the amount subject to threshold: (A - A₁) _____ lbs. (B - B₁) _____ lbs. (C - C₁) 9,000 lbs.

Compare to thresholds for section 313 reporting. 25,000 lbs. 25,000 lbs. 10,000 lbs.

If any threshold is met, reporting is required for all activities. Do not submit this worksheet with Form R. Retain for your records.

C-17

MANAGEMENT PRACTICES

■ Begin early

- Implement a program to gather “real-time” data on usage
- Searches for historical information can be difficult

■ Use a team approach

- Include all relevant personnel (e.g., engineering, environmental, operations)
- Spread the work

C-18

RECORDKEEPING

■ Detailed records

- Improve reporting accuracy and data quality
- Reduce replication of effort from year to year

■ Well-labeled calculations and assumptions

- Serve as standard operating procedures (SOPs) for future years
- Ensure consistency from year to year, especially if personnel responsible for reporting change

■ EPA will review records during a data quality audit

C-19

TRI REPORTING SOFTWARE

■ For the Reporting year (RY) 2001, EPA is distributing two types of reporting software to assist facilities in reporting to the Toxics Release Inventory (TRI).

■ The *TRI-Made Easy (TRIME)* Reporting Software was distributed to a limited number of facilities for a pilot in RY 2000. It is now available to all facilities for RY 2001.

■ The *Automated TRI Reporting Software (ATRS)* is the traditional reporting software that has been distributed by EPA for a number of years.

■ For RY 2001, facilities may report using either *ATRS* or *TRI-ME*; however, EPA plans to transition from *ATRS* to *TRI-ME* in the near future.

C-20

TRI REPORTING SOFTWARE

- Both *ATRS* and *TRI-ME* will be distributed via CD ROM to all facilities that have reported to TRI in the last two reporting years. The software will also be available to download from EPA's website at www.epa.gov/tri.
- The *TRI-ME* software is an interactive, intelligent, user-friendly software program that assist facilities in determining and completing their TRI reporting obligations. In contrast, while *ATRS* allows facilities to complete the Form Rs and As on their personal computers, it provides much less guidance and assistance.
- Both *TRI-ME* and *ATRS* allow users to access and search the *TRI Assistance Library (TRIAL)*. *TRI-ME* is intelligently linked to *TRIAL* so that the user can view pre-selected TRI definitions and guidance from *TRIAL* that are relevant to specific *TRI-ME* screens.

C-21

OVERVIEW OF FORM R, PART I

- Two principal types of information
 - Facility -specific
 - Chemical-specific
- One form must be submitted to EPA and to the SERC/TERC for each Section 313 chemical or chemical category exceeding applicable thresholds (§372.30(a))

C-22

PART I: FACILITY INFORMATION

- Identifies the facility
- Provides key data for linking information to other databases
- Identifies key personnel

C-23

PART I. SECTIONS 1 AND 2

- Reporting year is the calendar year to which the reported information applies; not the year in which the form is submitted
- Trade secret submissions require substantiation (40 CFR 350)
- Two forms are required for trade secret submissions:
 - One complete
 - One "sanitized" version

PART I. FACILITY IDENTIFICATION INFORMATION			
SECTION 1. REPORTING YEAR _____			
SECTION 2. TRADE SECRET INFORMATION			
21	Are you claiming the toxic chemical identified on page 2 trade secret? <input type="checkbox"/> Yes (Answer question 2.2; Attach substantiation forms) <input type="checkbox"/> No (Do not answer 2.2; go to Section 3)	22	Is this copy <input type="checkbox"/> Sanitized <input type="checkbox"/> Unsanitized (Answer only if "YES" in 2.1)

C-24

PART I. SECTION 3

- An original signature is required
- Name must be legible (printed or typed)
- Title of the official who signs is also required

SECTION 3. CERTIFICATION (Important: Read and sign after completing all form sections.)		
I hereby certify that I have reviewed the attached documents and that, to the best of my knowledge and belief, the submitted information is true and complete and that the amounts and values in this report are accurate based on reasonable estimates using data available to the preparers of this report.		
Name and official title of owner/operator or senior management official:	Signature:	Date signed:

C-25

PART I. SECTION 4.1

- All parts of the facility name and address are essential
- Mailing address required if different from street address
- TRI facility identification number (if a form was filed in a previous reporting year) or "New Facility" (if reporting for the first time)
- All establishments at one facility should use the same TRI facility identification number (if reporting separately)

SECTION 4. FACILITY IDENTIFICATION		
4.1	TRI Facility ID Number	
Facility or Establishment Name	Facility or Establishment Name or Mailing Address (if different from street address)	
Street	Mailing Address	
City/County/State/Zip Code	City/County/State/Zip Code	Country (Non-US)

C-26

PART I. SECTION 4.1

- Federal facilities
 - Enter name of Federal department or agency standard acronym followed by the site name

SECTION 4. FACILITY IDENTIFICATION		
4.1	TRI Facility ID Number	
Facility or Establishment Name	Facility or Establishment Name or Mailing Address (if different from street address)	
Street	Mailing Address	
City/County/State/Zip Code	City/County/State/Zip Code	Country (Non-US)

C-27

PART I. SECTION 4.2 THROUGH 4.4

- Specify whether the form covers all or part of the facility
 - Federal facilities and GOCOs also check either "c" or "d," but not both
- List name and phone number
 - Technical contact - should be able to explain data to EPA
 - Public contact - should be able to represent the facility's data to the public

SECTION 4. FACILITY IDENTIFICATION (Continued)			
4.2	This report contains information for: Important check a <input checked="" type="checkbox"/> b; check c if applicable		
	a. <input type="checkbox"/> An entire facility	b. <input type="checkbox"/> Part of a facility	c. <input type="checkbox"/> A Federal facility
	d. <input type="checkbox"/> GOCO		
4.3	Technical Contact Name		Telephone Number (include area code)
4.4	Public Contact Name		Telephone Number (include area code)

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PART I. SECTION 4.5 THROUGH 4.6

■ Enter covered 4-digit SIC code(s)

- Enter primary SIC code in first box (a.)
- Enter other covered SIC codes in decreasing order of significance

■ Supply latitude and longitude coordinates

4.5	SIC Code(s) (4-digits)		Primary a.		b.	c.	d.	e.	f.
4.6	Latitude	Degrees	Minutes	Seconds	Longitude	Degrees	Minutes	Seconds	

C-29

PART I. SECTION 4.7 THROUGH 4.10

■ Enter the specified identification numbers or “NA” if not applicable

- Enter Dun and Bradstreet number(s)
- EPA ID numbers (assigned to RCRA-covered facilities)
- NPDES permit number(s)
- Underground Injection Well Code (UIC) I.D. number(s)

4.7	Dun & Bradstreet Number(s) (9 digits)	4.8	EPA Identification Number(s) (RCRA I.D. No.) (12 characters)	4.9	Facility NPDES Permit Number(s) (9 characters)	4.10	Underground Injection Well Code (UIC) I.D. Number(s) (12 digits)
a.		a.		a.		a.	
b.		b.		b.		b.	

C-30

PART I. SECTION 5

■ Private-sector and GOCO facilities

- Enter complete name and Dun & Bradstreet number of parent company

■ Federal facilities

- Enter the complete name of department or agency for parent company (e.g., U.S. Department of Interior)
- Check “NA” for Dun & Bradstreet number of parent company

SECTION 5. PARENT COMPANY INFORMATION			
5.1	Name of Parent Company	<input type="checkbox"/> NA	
5.2	Parent Company's Dun & Bradstreet Number	<input type="checkbox"/> NA	(9 digits)

C-31

PART II: CHEMICAL-SPECIFIC INFORMATION

■ Identifies

- Section 313 chemical and its uses at the facility
- Quantities released or otherwise managed as wastes
- Waste management and source reduction activities
- Maximum quantity of the Section 313 chemical on site at one time

C-32

PART II. SECTIONS 1 AND 2: TOXIC CHEMICAL OR MIXTURE IDENTITY

- Complete either Sections 1.1 & 1.2 or Section 1.3 or Section 2
- Enter CAS number or category code and name of Section 313 chemical or chemical category (except on “sanitized” form)
- Enter generic name only if claiming Section 313 chemical name as a trade secret (Section 1.3)

SECTION 1. TOXIC CHEMICAL IDENTITY	
(Important: DO NOT complete this section if you completed Section 2 below.)	
1.1	CAS Number (Important: Enter only one number exactly as it appears on the Section 313 list. Enter category code if reporting a chemical category.)
1.2	Toxic Chemical or Chemical Category Name (Important: Enter only one name exactly as it appears on the Section 313 list.)
1.3	Generic Chemical Name (Important: Complete <u>only</u> Part I, Section 2.1 if checked “yes.” Generic name must be structurally descriptive.)

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PART II. SECTIONS 1 AND 2: TOXIC CHEMICAL OR MIXTURE IDENTITY

- If supplier claims trade secret, report generic name by supplier

SECTION 2. MIXTURE COMPONENT IDENTITY	
(Important: DO NOT complete this section if you complete Section 1 above.)	
2.1	Generic Chemical Name Provided by Supplier (Important: Maximum of 70 characters, including numbers, letters, spaces, and punctuation)

C-34

PART II. SECTION 3 OF THE FORM R: ACTIVITIES AND USES OF THE CHEMICAL AT THE FACILITY

- Specify use(s) of the Section 313 chemical: manufacture, process, or otherwise use
- Report only activities taking place at reporting facility
- Check all applicable boxes

SECTION 3. ACTIVITIES AND USES OF THE TOXIC CHEMICAL AT THE FACILITY		
(Important: Check all that apply)		
3.1 Manufacture the toxic chemical:	3.2 Process the toxic chemical:	3.3 Otherwise use the toxic chemical:
a. <input type="checkbox"/> Produce b. <input type="checkbox"/> Import	a. <input type="checkbox"/> Is a reactant	a. <input type="checkbox"/> Is a chemical processing aid
<u>If produce or import:</u>	b. <input type="checkbox"/> As a formulation component	b. <input type="checkbox"/> As a manufacturing aid
c. <input type="checkbox"/> For onsite use/processing	c. <input type="checkbox"/> Is an article component	c. <input type="checkbox"/> Incidental or other use
d. <input type="checkbox"/> For sale/distribution	d. <input type="checkbox"/> Repackaging	
e. <input type="checkbox"/> As a byproduct	e. <input type="checkbox"/> Is an impurity	
f. <input type="checkbox"/> As an impurity		

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